Appl. No. : 09/315,292
Filed : May 20, 1999

AMENDMENTS TO THE CLAIMS

1-98. (Canceled).

99. (Currently Amended) A method for administering an oligonucleotide into a lung of a mammal, said method comprises:

aerosolizing an oligonucleotide; and

introducing the aerosolized oligonucleotide into the lung of a mammal,

wherein the aerosol particles have a size of about 1 to about 5 microns, wherein said oligonucleotide is about 8 to about 30 nucleotides in length, wherein at least one ~~a plurality of~~ nucleosides in said oligonucleotide is a ~~are~~ 2'-O-methoxyethyl nucleosides, wherein at least one internucleotide linkage within said oligonucleotide is a phosphorothioate linkage, and wherein said oligonucleotide is taken up by at least one cell type in the lung of the mammal.

100. (Previously Presented) The method of claim 99, wherein all internucleotide linkages within said oligonucleotide are a phosphorothioate linkage.

101. (Previously Presented) The method of claim 99, wherein at least one cytosine in said oligonucleotide is a 5-methylcytosine.

102. (Previously Presented) The method of claim 99, wherein every cytosine in said oligonucleotide is a 5-methylcytosine.

103. (Previously Presented) The method of claim 99, wherein said oligonucleotide is in an aqueous media.

104. (Previously Presented) The method of claim 99, wherein said oligonucleotide is in sterilized, pyrogen free water.

105. (Previously Presented) The method of claim 99, wherein said oligonucleotide is in a saline solution.

106. (Previously Presented) The method of claim 99, wherein said oligonucleotide is in a powder.

107. (Previously Presented) The method of claim 99, wherein each internucleotide linkage within said oligonucleotide is a phosphorothioate linkage, and wherein each cytosine is a 5-methylcytosine.

108. (Canceled).

109. (Previously Presented) The method of claim 99, wherein said oligonucleotide is about 15 to about 25 nucleotides in length.

110. (Previously Presented) The method of claim 109, wherein all internucleotide linkages within said oligonucleotide are a phosphorothioate linkage.

111. (Previously Presented) The method of claim 109, wherein at least one cytosine in said oligonucleotide is a 5-methylcytosine.

112. (Previously Presented) The method of claim 109, wherein every cytosine in said oligonucleotide is a 5-methylcytosine.

113. (Previously Presented) The method of claim 109, wherein said oligonucleotide is in an aqueous media.

114. (Previously Presented) The method of claim 109, wherein said oligonucleotide is in sterilized, pyrogen free water.

115. (Previously Presented) The method of claim 109, wherein said oligonucleotide is in a saline solution.

116. (Previously Presented) The method of claim 109, wherein said oligonucleotide is in a powder.

117. (Previously Presented) The method of claim 109, wherein each internucleotide linkage within said oligonucleotide is a phosphorothioate linkage, and wherein each cytosine is a 5-methylcytosine.

118. (Canceled).

119. (Currently Amended) The method of claim ~~118~~ 109, wherein said oligonucleotide is 20 nucleotides in length, and said oligonucleotide is in a saline solution.

120. (Canceled).

121. (Previously Presented) The method of claim 119, wherein each internucleotide linkage within said oligonucleotide is a phosphorothioate linkage, and wherein each cytosine is a 5-methylcytosine.

122. (New) The method of claim 99, wherein pulmonary uptake of said oligonucleotide is increased compared to an oligonucleotide without 2'-O-methoxyethyl modifications.

123. (New) The method of claim 122, wherein pulmonary uptake is increased at least 2-fold.

124. (New) The method of claim 122, wherein pulmonary uptake is increased at least 3-fold.

125. (New) The method of claim 99, wherein hepatic uptake of said oligonucleotide is decreased compared to an oligonucleotide without 2'-O-methoxyethyl modifications.

126. (New) The method of claim 99, wherein 0.8 mg/kg, 1.5 mg/kg or 3.2 mg/kg of oligonucleotide is administered to the mammal.

127. (New) The method of claim 99, wherein less than 3.2 mg/kg of oligonucleotide is administered to the mammal.